Appendix A: Use Cases

Table of Contents

1 Introduction

The following business scenarios expressed as "use cases", detail each of the activities to be performed by the MIRCal. Persons not familiar with the methodology should refer to Ivar Jacobson, "Object-Oriented Software Engineering, A Use Case Driven Approach" (Addison-Wesley, 1992). The notation followed in this document reflects that described in the Unified Modeling Language (UML) version 1.1.

The majority, if not all, of the use cases presented are *abstract* use-cases, in that they are tailored to capture business activities, and not the specific implementation details that would be captured in a *concrete* use case. At this level, use cases form a hierarchy of business functions, grouped by common goals. The detailed design phase of a project would be responsible for creating *concrete* use cases; the physical descriptions of how an actor uses MIRCal in order to meet business activities.

This document consists of two sections that depict the business activities of the MIRCal. *Use Case Diagrams* graphically representing the business activities and *Use Case Narrative* which describes the business activity and the process in a narrative fashion. The *Use Case Diagrams* are located at the end of this document and are linked to the narrative by the section reference number (e.g. 2.1 Collect Patient Data).

1.1 Business Component Overview

The collection, cleansing, and distribution of patient data (discharge, ambulatory surgery, and emergency room) within MIRCal relies on a great deal of automation. The following is a synopsis of the proposed business components based on the Context Level Use Case Diagrams.

Collect and Validate Patient Data

The purpose of this business function is to collect and validate the data submitted by the licensed hospitals and certified abstractors. Data will be collected from these submitters in the following ways:

- Electronic Media (e.g. tape, diskette).
- EDI Transactions.
- E-Mail Attachments.
- WEB Based Data Entry - Entered Transaction Records using the OSHPD WEB Site Forms.

Once the data are received by one of the previous mechanisms, the data will be loaded and an acknowledgement or rejection notice will be generated back to the data submitter. An automated acknowledgement/rejection may be submitted in one of the following ways:

- EDI Transactions.
- E-Mail Attachments.
- WEB Based Data Entry - Enter Transaction Records using WEB Site Forms.
- Fax
- Hardcopy

Acknowledgement/Rejection notices may enable provisional acceptance that allows for data corrections, but does not require them; notices requiring corrections; or final acceptance notices.

The incoming data will be subjected to a battery of automated editing and validation rules. These rules can be classified as follows:
- Consistency Checking
- Licensing Edits
- Reasonability Edits
- Standard Edits.
- Coding Edits.
- Trending Edits

The results of the data editing will be transmitted back to the submitter utilizing EDI, E-MAIL, Fax, or Hardcopy reports. It will be the responsibility of the submitter to correct the errors detected and resubmit the corrected data.

Manage Data Quality And Completeness

A series of reports and on-line options will be available for OSHPD Analysts and Management to review the completeness and quality of the data submitted. This information will be available to determine the completeness of an individual submitter's data or for the entire reporting period. These reports will be made available to the submitter for the purposes of educating and communicating with hospitals.

Produce Distribution Products

With the implementation of a relational database, the production of standard and custom products for end users will be facilitated. In addition, the standard public information will be made available for WEB distribution.

Delinquency and Penalty Processing

Through the automated tracking of data submissions, data re-submissions, and delinquencies, reminder notices, delinquency letters, and penalty letters will be generated by the system. A mechanism will exist that will enable OSHPD Analysts to adjust the number of days and dates associated with the generation of these notices.

Query and Record Submitter Data

In order to support inquiries from the submitters and hospitals regarding the current status or quality of data submissions, MIRCal will permit the OSHPD Analyst to query and record information regarding the hospital submissions. MIRCal shall permit the entry and inquiry of the following types of information:

- Query to review File Acknowledgements.
- Query to review Error Notifications.
- Query to review letter history information (type of letter sent, and date).
- Query of correspondence entered by OSHPD Analyst.
- Entry of date, times, and notes regarding conversation or correspondence.

Perform System Maintenance

System Maintenance functions of MIRCal will need to exist in order to perform the following:

- Manage Submitter Data.
- Manage User Data.
- Maintain Element and Code Tables.
- Maintain rules for case building, identity masking, consistency checking, and trending analysis.
- Load external data sources (e.g. ICD-9 Codes, Grouper).

1.2   Acronyms

The following is a listing of acronyms used throughout the use cases:

Term	Definition
EDI	Electronic Data Interchange
OSHPD	Office of Statewide Health Planning and Development
WEB	World Wide Web (Internet)
EC	Electronic Commerce
ICD	International Classification of Diseases
DRG	Diagnosis Related Group
OLTP	On-Line Transaction Processing

OLAP	On-Line Analysis Processing

1.3   Actors

Actors can be defined as the individual person, department, or system that uses or benefits from the MIRCal. The following is a list of the actors and a brief description:

Actor	Description
Accounting	Accounting and Reporting Systems Section of OSHPD.
EDI Gateway	EDI Gateway used for transmitting EDI Transaction Files
E-Mail Server	An e-mail server used to post and dispatch e-mail.
External Data Source	Generic description of the data source vendors that provide ICD-9 Codes, Grouper, ZIP Code Files, etc.
Hospital/ Abstractor	The institution or facility submitting Patient data.
Legal	Legal department responsible for imposing delinquency and penalties on the hospitals.
Licensed File System	Licensing File System. Supplies the hospital licensing information for the purposes of checking to ensure the facility is licensed for the services provided in the data submissions.
OSHPD System Admin	System Administration Staff
OSHPD Analyst	Analysis Staff
OSHPD Management	OSHPD Management staff.
Product Customers	Anyone desiring or mandated to be on the distribution list for data products.
WEB Server	OSHPD WEB Server

2   Collect Patient Data

2.1   Collect Patient Data

2.1.1   Description

This Use Case begins when MIRCal receives data from a Hospital or abstracting agency. The data may be received physically in an electronic format, from an EDI Gateway in the form of an EDI File, from the MIRCal Web Server when data are entered into Web Site Forms, or in the form of a file attached to an E-mail message coming from the E-mail Server.

The data will initially be received into the MIRCal EDI Database, and then will be posted to the OLTP Database. During the posting process, data mapping and validations will occur. An Acknowledgement File indicating transmission errors or success will be returned to the Hospital/Abstractor. This Use Case ends when the data have been posted to the OLTP Database.

2.1.2   Extends Scenarios

1. Data Validation Process.

2. Transmit Acknowledgement File.

3. Post APR-DRG to Database

2.1.3   Pre-Conditions

Patient data must be submitted to the MIRCal in one of the following ways:

a) Data are extracted from the Hospital/Abstractor's system; an EDI File is created and transmitted to MIRCal through the EDI Gateway.

b) Data are entered in the forms on the MIRCal Web Site and transactions are executed.

c) Data are entered into a file and attached to an e-mail message sent to MIRCal.

d) Data are received in an electronic medium (e.g. tape, diskette) and loaded into MIRCal.

2.1.4 Post-Conditions

N/A

2.1.5 Actors

Actor	Description
Hospital/ Abstractor	The institution or facility submitting Patient data.
EDI Gateway	EDI Gateway used for transmitting EDI Transaction Files
E-Mail Server	An e-mail server used to post and dispatch e-mail.
WEB Server	OSHPD WEB Server

2.1.6 Process

1. Receive Data

EDI File Transaction - Receive the EDI File from the EDI Gateway. Process and post the transactions into the EDI Database.

WEB Site Data Entry – Receive the data entered into WEB Site Forms from the WEB Server. Process and post the transactions to the EDI Database

E-Mail Attached File – Files attached to an e-mail message are in a predefined format and are posted to a specific MIRCal mailbox. Process and post the transactions in the Mailbox Files to the EDI Database

Electronic Medium – Files are received at OSHPD in electronic format. Process and post the transaction into the EDI Database.

2. Post Data to the OLTP Database

Data from the EDI Database will be posted to the OLTP Database. During this process data validations, HCFA DRG Assignments, APR-DRG translation, and transmission acknowledgements will be performed. The APR-DRG's are not critical to the editing process and can be added once full acceptance of the data are granted from the Validate Incoming Data process.

2.2   Validate Incoming Data

2.2.1   Description

This Use Case begins when new or updated data are being posted to the MIRCal OLTP Database. Data elements will be edited using a table driven schema. Data content and format edits will be applied. Consistency checking will also be performed to compare new and updated records with previous records of the same type. When errors are found, they will be classified and assigned a status based on the error type or severity.

Based on the severity of the errors found, a file may be accepted or rejected and posted to the OLTP database, or rejected and not posted. All records with errors will result in an error entry in the Acknowledgement File to be returned to the Hospital/Submitter requesting corrections. The whole file submission must meet all Error Tolerance Levels before the file can be accepted. This Use Case ends when all new or updated data have been validated, accepted records have been assigned a status, and error or success entries have been logged in the Acknowledgement File.

2.2.2   Extends Scenarios

N/A

2.2.3   Pre-Conditions

New or updated data must be received and are being posted to the MIRCal OLTP Database.

2.2.4   Post-Conditions

Error and success acknowledgements must be sent to the Hospital/Abstractor once the data are received to acknowledge receipt of the data and after all validation processing is completed to report the result of the data editing.

The Hospital/Abstractor may need to check the MIRCal Web Site for data quality reports pertaining to themselves, unless the error notifications are being sent via e-mail, EDI Files, or fax.

2.2.5   Actors

N/A

2.2.6 Process

1. Validate Data Records – Records are either accepted, or assigned an error status indicating they contain minor or major errors based on rules defined for data content and format.

2. Perform Consistency Checking on Data Records - Records are either accepted, or assigned a status indicating they contain minor or major errors based on consistency rules set up on the system. Consistency validation will compare data across transactions. For example, multiple appendectomies are reported on the same patient on separate records, or different genders or dates-of-birth are reported (may indicate multiple users of the same social security number).

3. Perform Licensing Edits on Data Records – Validate whether the types of care submitted match those for which the facility is licensed to provide.

4. Perform Standard Edits – Standard edits are defined as conversion, field and relational edits. Conversion assigns a value based on the content of one or more other fields. Field edits identify data elements that are blank, incomplete or invalid. Relational edits identify data elements that should correspond with one or more data elements, but do not. Standard Edits are defined in the Editing Criteria Handbook last revised December 1997, currently under revision.

5. Perform Coding Edits - The coding edit component validates that diagnostic, procedure, and external causes (E-Codes) are consistent. If errors are detected, then a message will be sent via an error transaction to the provider.

6. Trend Edits – One mechanism that is used to assure that a provider has submitted all records is the use of trend edits. The trend edit component will compare current year volumes (by service) against trend adjusted values from previous years. If the values differ by a statistically significant value, the file will be flagged for subsequent review.

7. Add entries to the Acknowledgement File to be returned to the Hospital/Abstractor for all errors encountered for each record validated. If no errors are found, acknowledge a successful transmission for the record.

2.3   Transmit Acknowledgement File

2.3.1 Description

This Use Case begins when all validation processing has been completed, and the Acknowledgement File has been updated with error and success indicators. An Acknowledgement File will be sent to each Hospital/Abstractor who submitted data transactions to MIRCal. The file will include errors, or a success indicator for each record

received by MIRCal. The file will be sent via E-Mail, EDI, fax, or posted to the MIRCal Web Site based on a pre-arranged data exchange agreement with the Hospital/Abstractor.

There will be an automated process that will monitor records containing errors that have been posted to the OLTP Database. These records would have a specific status assigned during validation. The process will make updates to the record status based on aging. This may cause these records to be rejected and deleted from the system if the Hospital/Abstractor does not update them with corrections within a pre-defined time period.

This Use Case ends when the Acknowledgement File has been transmitted to the Hospital/Abstractor.

2.3.2 Extends Scenarios

N/A

2.3.3 Pre-Conditions

New or updated data must be received and processed for validations, with error and success entries made to the Acknowledgement Files.

2.3.4 Post-Conditions

The Hospital/Abstractor may need to check the MIRCal Web Site for Acknowledgement Files pertaining to themselves, unless they are being sent via e-mail, fax, or EDI Files.

2.3.5 Actors

Actor	Description
WEB Server	OSHPD WEB Server
EDI Gateway	EDI Gateway used for transmitting EDI Transaction Files
E-Mail Server	An e-mail server used to post and dispatch e-mail.
Fax Server	A fax server used to post and dispatch faxes.
Hospital/ Abstractor	The institution or facility submitting patient data.

2.3.6   Process

1. Transmit Acknowledgement File - The File may be sent to the Hospital/Abstractor as an EDI File, or as a file attached to an E-Mail message, fax notification, hardcopy report, or posted to the MIRCal Web Site for access by the Hospital/Abstractor. This would be negotiated in a partnership agreement with the Hospital/Abstractor.

2. Automatically Update Record Statuses Based on Aging – Records with a status indicating they contain errors, will have their status updated based on how long they have been sitting at their current status. Error notification reminders may be sent to the Hospital/Abstractor by the system requesting error corrections. Records that are not corrected within pre-defined time frames may be set to a rejected status and purged from the system or archived. Historical reporting of uncorrected errors will be available from the system.

3   Report and Manage Data Received

3.1   Manage Data Quality and Completeness

3.1.1   Description

This Use Case begins when the OSHPD Analyst decides to generate reports to be used for managing data quality and completeness. These reports will be used to identify validation and consistency errors within Hospital/Abstractors. They will also be used by OSHPD Analysts to monitor the pending records, which are aging while awaiting corrections from Hospital/Abstractors. Management reports will be produced which will help monitor data quality, data content, and trending analysis. Through the analysis of these reports, OSHPD may determine non-compliance and generate special audits or other investigations until compliance is demonstrated.

This Use Case ends when the desired Data Quality and Completeness reports have been produced and optionally published on the MIRCal Web Site, and Management reports have been produced and sent to OSHPD Management.

3.1.2   Extends Scenarios

N/A

3.1.3   Pre-Conditions

N/A

3.1.4   Post-Conditions

The Hospital/Abstractor will receive reports or is required to check the MIRCal Web Site to review data quality and completeness reports.

3.1.5   Actors

Actor	Description
Hospital/ Abstractor	The institution or facility submitting Patient data.
OSHPD Analyst	Analysis Staff
OSHPD	OSHPD Management staff.

Management	
WEB Server	OSHPD WEB Server

3.1.6   Process

1.   Generate and Analyze Data Quality Statistics – Analyze data quality and trending data for Hospital/Abstractors. This information will be used to perform data quality reporting and to track data the quality improvement performance of Hospital/Abstractors.

2. Generate Data Quality Reports

   Data Quality reports may include, but are not limited to, the reports identified below:

   Record Validation Report

   Data Consistency Report

   Data Quality and Completeness Report

   Pending Record Aging Report

   Trending Reports

3.   Publish the Data Quality Reports and Completeness Reports. Reports can be generated in hard-copy form, sent as E-MAIL attachments or published on the OSHPD Web Server where Hospital/Abstractors will have access to the reports pertaining to them.

4.   Management Reports

   Management reports may include, but are not limited to, the reports identified below:

   Completeness and Accuracy Reports by Reporting Period (aggregate and individual)

   Error Trend Analysis Report (aggregate and individual)

   Transaction Volumes by Type, by Record

   Delinquency and Penalty Reports

<center>Rejected vs. Accepted by Hospital/Abstractor</center>

5. Send Management Reports to MIRCal Management via inter-office mail.

The following is a list of reports currently used by the patient Discharge Data Section Activity Section:

Name	Description	Frequency
Master activity listing	Tracks receipt and status of data	Reporting cycle
Return log	Tracks report packages returned to hospitals for correction	Reporting cycle
Replacement log	Tracks notification to hospitals to send replacement data	Reporting cycle
Analyst file tracking log	Tracks location of file (which analyst) and production phase	Reporting cycle
Data processing log	Tracks media sent to ISS for processing	Reporting cycle
Batch log	Assigns batch numbers to media sent to ISS	Reporting cycle
Discharge data available for public disclosure report	Tracks data by hospital as it is made public	Updated as data becomes available during report cycle
Analyst production reports	Report showing number of files in each stage of production	Reporting cycle
Penalty tracking log	Tracks amount of penalty by hospital	Annual log with weekly postings
Analyst file assignment log	Tracks hospital files assigned to each analyst	Reporting cycle
Modification/Non-compliance log	Identifies hospitals which have been granted modification to reporting or have been issued a non-compliance	Annual
Initial extension request log	Tracks hospitals requesting time extensions	Reporting cycle
Subsequent extension log	Tracks hospitals requesting subsequent time extensions	Reporting cycle

The following is a listing of the reports currently utilized by the reviewing analyst:

Name	Description	Frequency Per Report Period
Data Distribution Report	Summary of all data submitted. Displays each Data Element ; lists number and percentage of records as submitted to OSHPD.	Part of the file as received by analyst. Also generated with each round of corrections. Can be ordered at any time by analyst.
Add Process Report	Shows the number of records added to the Master File and the number of records with invalid discharge dates (dates that fall outside the report period).	Part of the file as received by the analyst.
Records with Invalid Discharge Dates	Lists all abstracts/records, in discharge date order, that were not added to the Master File because of an invalid, blank, alpha-character or partially coded discharge date.	Part of the file as received by the analyst.
MDC/DRG Grouper Statistics	Summarizes the records submitted according to their MDCs and DRGs.	Part of the file as received by the analyst.
Questionable DRG Records	Lists the individual records that are grouped to DRG 468,469,476 and 477.	Part of the file as received by the analyst.
Possible Duplicate Records Report	Lists any records that may be duplicate submissions. (These records are compared by Date of Birth, Admit Date, Discharge Date, and Sex).	Part of the file as received by the analyst. Can be ordered / generated by the analyst.
E-Code Report	Lists the number of E-Codes reported within each Type Of Care.	Part of the file as received by the analyst.
Edit Summary Report	Summarizes, by data element, the number and percentage of records that have edit flags. (Has a brief description of the flags on the top of the page.)	Part of the file as received by the analyst. Also generated with each round of corrections. Can be generated by the analyst.
Edit Detail Report	Lists the individual records that have edit flags.	Part of the file as received by the analyst. Also generated with each round of corrections. Can be generated by the analyst.

Name	Description	Frequency Per Report Period
Re-Admissions Summary Report	Summarizes, by data element, the number and percentage of records that have K-edit flags. (Has a brief description of the flags on the top of the page.)	Part of the file as received by the analyst. Can be generated by the analyst.
Re-Admissions Detail Report	Sorted and grouped by Social Security Number, this report has K-edit flags that identify inconsistencies in data reported for the same patient who had more than one inpatient stay at one hospital during the reporting period	Part of the file as received by the analyst. Can be generated by the analyst.
Listing of Blank and Invalid SSN's	Show all records with a blank or invalid SSN.	Part of the file as received by the analyst.
Coding Edit Summary Report	Summarizes, by flag, the number and percentage of records that have V- flags. (Has a brief description of the flags on the top of the page.)	Part of the file as received by the analyst. Can be generated by the analyst.
Coding Edit Detail Report	Lists the individual records that have V-edit flags.	Part of the file as received by the analyst. Can be generated by the analyst
Trend Report (Optional.)	Similar to the Data Distribution but can order several report periods for comparison purposes.	Must be ordered/generated by the analyst if report is required.
Master File Listings	Ordered to display almost any subset(s) of records the analyst chooses to select for closer analysis.	Ordered by the analyst to meet specific need.
Selected Edit Flag Report	Ordered by the analyst to list/display particular edit flags.	Ordered by the analyst to meet specific need.
Grouper	Ordered by the analyst to regroup records to ensure that DRG corrections have been effective.	Typically generated only once by the analyst; frequently not generated at all.
Triage and TOPS Report	Summary report of the PDD submitted information.	Typically generated for early data submissions to view gross data quality issues.
Automated Letters	Delinquency Letters, Penalty	As needed.

Name	Description	Frequency Per Report Period
	Letters, Final Acceptance Letters	

4   Distribute Products

4.1   Produce Distribution Products

4.1.1   Description

This Use Case begins when the OSHPD Distributor generates a data file or report for the purpose of producing a product for distribution. The product would consist of a MIRCal data extract file written onto a data medium or a report that can be distributed to customers. These are Public Use files and would include identity masking based on the rules in the Identity Masking Rules setup tables. This Use Case ends when the product is distributed to the customer.

4.1.2   Extends Scenarios

   N/A

4.1.3   Pre-Conditions

   N/A

4.1.4   Post-Conditions

   N/A

4.1.5   Actors

Actor	Description
Product Customers	Anyone desiring or mandated to be on the distribution list for data products
OSHPD Analyst	Analysis Staff
WEB Server	MIRCal WEB Server
OSHPD Distributor	Individual responsible for responding to the product customers need for data.

4.1.6   Process

   1. Generate Extract File of Required Product Data – The MIRCal Distributor will create a file of MIRCal data that will be included for Standard Product

distribution. OSHPD Distributor would generate files of data for Custom Product distribution. These are Public Use files and would include identity masking based on the rules in the Identity Masking Rules setup tables.

2. Write Extract File to Distribution Medium - The data file will be written to a medium that can be used for distribution to customers.

3. Generate Reports Containing Required Product Data – The OSHPD Distributor will generate reports from MIRCal data that will be distributed to the Product Customers.

4. Provide Product Extract Files to Customers - The OSHPD Distributor will create the product medium and manage its distribution to customers.

In order to protect patient confidentiality, different levels of publicly available data need to be made available depending on the authorization granted for the data. Currently, OSHPD masks particular data sets to protect the patient confidentiality. Non-public and confidential data sets are available via formal request and special review policy and procedures.

Version A data set is masked as follows:

Social security numbers are converted to a "record linkage" number by a process approved by the Director. These numbers allow for the accurate linkage of episodes of hospitalization.

The age of a patient at the time of discharge is used instead of date of birth.

Admission dates are available as the day of the week and the month of the year of admission.

Discharge dates are available as the number of days from admission to discharge (total length of stay).

Dates of procedures are available as the number of days between admission and the date of each procedure.

Three digit zip codes are used instead of the five digit value.

Version B data set is masked as follows:

Neither social security number nor record linkage numbers are available.

Age categories are used for a patient's age at time of discharge instead of date of birth.

Admission dates are available as the quarter of the year of admission.

Discharge dates are available as the number of days from admission to discharge (total length of stay).

Dates of procedures are available as the number of days between admission and the date of each procedure.

5. Provide Product Reports to Customers - The OSHPD Distributor will distribute the reports to MIRCal Customers, including the MIRCal Web Site.

5   Delinquency and Penalty Processing

5.1   Delinquency and Penalty Tracking

5.1.1   Description

This Use Case begins when the OSHPD Analyst adds or updates the days or dates associated with the generation of delinquency or penalty notices being sent to the hospital. The number of days permitted for delinquency or penalty would be table driven with OSHPD Analyst update authority. The OSHPD Analyst could modify the days as necessary for an individual Hospital to account for special circumstances and appeals. This Use Case ends when the information has been recorded in the MIRCal and if appropriate, a delinquency notice or penalty notice is generated.

5.1.2   Extends Scenario

N/A

5.1.3   Pre-Conditions

N/A

5.1.4   Post Conditions

N/A

5.1.5   Actors

Actor	Description
Hospital/ Abstractor	The institution or facility submitting Patient data.
Legal	Legal department responsible for imposing delinquency and penalties on the hospitals.
OSHPD Analyst	Analysis Staff
Accounting	Accounting and Reporting Systems Section of OSHPD.

5.1.6   Process

1. Automatically Generate Reminder Notices – Based on the number of days set by the system to generate reminder notices, a reminder notice will be sent to the hospital administrator name and address on file. The notice may be sent hardcopy, fax, or e-mail. Currently reminder notices are sent 30 days and 90 days prior to the data due date.

2. Record Submitter Data Status – OSHPD Analyst is given access and ability to add and change the number of days or date in which the data will be delinquent or a penalty should be imposed. This information is recorded for a given Hospital ID and Reporting Period.

3. Automatically Generate Delinquency Notice – System automatically generates delinquency letter based on the default delinquency date for the hospital. Delinquency Letter or Final Delinquency Letter is generated based on the status of the hospital data submissions.

    Currently, the initial Delinquency Letter is generated approximately 10 days after due date of data and sent via certified mail directly to the hospital. If extension was requested, copy is sent to the requestor. Regulations require letter to be sent within 15 days of receipt.

    The Final Delinquency Letter is generated and sent to Legal within 40 days after due date of data along with supporting documentation

4. Automatically Generate Penalty Notice – System automatically generates penalty notices based on the penalty date for the hospital. Penalty Letter or Final Penalty Letter is generated based on the status of the hospital data submissions.

    Initial Penalty Letters are sent to the hospital administrators with a cc to contact person if appropriate. The Final Penalty Letters are sent with supporting documentation to Legal.

5. Automatically Generate Penalty Status Report – The system automatically generates a Penalty Status Report used by Accounting and Legal to track the status of the hospital data submissions and the delinquency and penalties. This report identifies information such as: hospital ID; name; reporting period; date submission due; date submission received; date submission rejected; appeal status, reason for waiver or reduction, final penalty amount, paid or owing status, date of notice (delinquency, penalty); and number of days overdue.

6 Query and Record Submitter Data

6.1 Query and Record Submitter Data

6.1.1 Description

This Use Case begins when the OSHPD Analyst, OSHPD Management, or Legal needs to record information regarding a phone call or correspondence with the facility or needs to access historical information regarding a facility. This Use Case ends when the information has been keyed into the MIRCal and posted to the OLAP database or the information has been retrieved and displayed.

6.1.2 Extends Scenario

N/A

6.1.3 Pre-Conditions

N/A

6.1.4 Post Conditions

N/A

6.1.5 Actors

Actor	Description
OSHPD Analyst	Analysis Staff
OSHPD Management	OSHPD Management staff.
Accounting	Accounting and Reporting Systems Section of OSHPD.
Legal	Legal department responsible for imposing delinquency and penalties on the hospitals.

6.1.6 Process

1. Record Contact History - The OSHPD Analyst, Management or Accounting will use the Hospital Name or Hospital ID to locate the facility for which they wish to record an activity. The system will record the date of the contact and provide a screen to enter

details regarding the phone conversation, piece of correspondence received, or actions by hospital or legal representative.

2. Query Submitter History - The OSHPD Analyst or Management will use the Hospital Name or Hospital ID to search for current and historical data transmission and contact (phone, correspondence) information. The MIRCal will display data transmission information by date and will include the following data elements: date received, number of records, reporting period, abstractor ID, and status of transmission. Ability to view the content and status of the file acknowledgement and record status information will also be available.

Information recorded as the result of a phone conversation or a letter that was recorded into the MIRCal will be available for inquiry in addition to access to correspondence history (letter type sent and date sent).

7   System Configuration and Maintenance

7.1   Maintain Setup and Configuration Tables

7.1.1   Description

This Use Case begins when the MIRCal System Administrator or OSHPD Anayst decides to perform maintenance functions on the system setup and configuration tables. These tables will include but not be limited to the User Profiles, Submitter Profiles, Validation Rules, Consistency Checking Rules, Identity Masking, Case Build Rules, and Trending Rules. This Use Case ends when the System Admin or OSHPD Analyst has finished creating, updating or deleting data in the desired tables.

7.1.2   Extends Scenario

   N/A

7.1.3   Pre-Conditions

   N/A

7.1.4   Post Conditions

   N/A

7.1.5   Actors

Actor	Description
OSHPD System Admin	System Administration Staff
External Data Source	Generic description of the data source vendors that provide ICD-9 Codes, Grouper, Zip Code Files, etc.
OSHPD Analyst	Analysis Staff

7.1.6   Process

   1. Maintain Submitter Profiles – These tables provide for the addition of and changes to the submitter information such as name, ownership, certification and various status-related information such as closure or consolidation.

2. Maintain User Profiles – These tables provide for role assignments and security levels to control access to system screens, functions, and data.

3. Maintain Internal Code Tables – These tables provide the valid code values and descriptions for various elements in the database that may change over time. The records will include an effective date so changes in code structures can be tracked over time. This provides a way to perform a "cross-walk" on the code structures for analysis and reporting purposes. The following Internal Code Tables have been identified:

Abbreviated K-Edit Descriptions Table 4000	Source: Custom Medium: on-line Frequency: As Necessary
Abbreviated V-Edit Descriptions Table 3004	Source: Custom Medium: on-line Frequency: annual
Admit Source Codes Table 3295	Source: Regulation Medium: on-line Frequency: Change in regulation
County Codes Table 0330	Source: Custom Medium: on-line Frequency: As Necessary
Diagnosis (ICD-9-CM) Table 3005	Source: Custom Medium: on-line Frequency: annual
Mapper Table Table 3096	Source: Custom Medium: on-line Frequency: annual

coding edits) Table 3002	Medium: on-line Frequency: annual
Relational V-Edit (for coding edits) Table 3003	Source: Custom Medium: on-line Frequency: annual

4. Maintain Consistency Checking Rules – These tables will provide the rules for performing consistency checks on data elements between records. For example, to check for a value in a previously received record to compare it against the value of an element in the current record being validated.

5. Maintain Identity Masking Rules – These tables provide the rules which identify which data elements to hide on public use files, and when. They also define the method to be used for masking the data for those elements that require uniqueness to be maintained. For example a patients identity may be a scrambled SSN with a DOB, or replaced with a record linkage number.

7. Maintain Trending Rules – These tables provide the rules that are used by the system to determine what data elements and aggregations should be used for trending edits. Trending rules will enable the OSHPD analyst to set trigger or threshold levels for comparative reporting. Some sample rules are as follows:

a) Report condition when total number of records reported varies plus or minus a set percentage from a previous reporting period.

b) Report condition when distribution among sex categories is abnormal.

c) Rules to detect too many or missing discharges.

d) Report condition when licensed services vary plus or minus a set percentage from a previous reporting period.

e) Determine if the number of Uncertainties are too high for Condition Present at Admission for primary or other diagnosis.

8 Load / Update Data From External Sources

8.1 Receive Data From External Sources

8.1.1 Description

This Use Case begins when data are received from an external data source such as the US Post Office, 3M, or Licensing. The data will be received and posted to the OLTP Database. This Use Case ends when the data have been posted to the OLTP database.

These tables provide the valid code values and descriptions for various elements in the database that may change over time. The records will include an effective date so changes in code structures can be tracked over time. This provides a way to perform a "cross-walk" on the code structures for analysis and reporting purposes. The following External Source Code Tables have been identified:

DRG Descriptions Table 3797	Source: 3M DRG software Medium: tape Frequency: annual
Grouper Program, not a table	Source: 3M DRG software Medium: tape Frequency: annual
Invalid Zip Code Prefixes Table 3482	Source: United States Postal Service Medium: tape Frequency: as supplied

8.1.2 Extends Scenarios

1. Receive and Post Data

8.1.3 Pre-Conditions

N/A

8.1.4   Post-Conditions

N/A

8.1.5   Actors

Actor	Description
External Data Source	Generic description of the data source vendors that provide ICD-9 Codes, Grouper, Zip Code Files, etc.
Licensing File System	Licensing File System. Supplies the hospital licensing information for the purpose of checking to ensure the facility is licensed for the services provided in the data submissions.

8.1.6   Process

1. Receive Data from External Sources in a predefined file format.

2. Data are posted the OLTP Database.

9   Use Case Diagrams

See next page for diagrams.